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ABSTRACT

Parkrose School District's goal-based instructional program is designed to meet state minimal-competency requirements, keep the district's students abreast of national and local performance, and inform parents and the community of district students' progress. In response to public concern over students' declining basic skills, the state of Oregon set general competency goals in ten personal and social areas, holding each school district responsible for developing, implementing, and meeting these goals. Parkrose created its program by defining goals, identifying educational weaknesses and solutions, and developing assessment methods and remediation programs. Goals in 15 curriculum areas, which meet 70 competencies drawn from the state requirements, are set at district, program, and course levels. Assessment occurs at the class level through tests and assignments. District-level assessment occurs through (1) criterion-referenced tests developed by the district from Rasch's and Popham's theories, and (2) norm-referenced national tests to compare Parkrose achievement levels with national and metropolitan levels. Parkrose reports on the program to parents and the community through an annual evaluation publication, public meetings, and status reports to students' parents. National and district reports indicate program success in reading and computing but lower achievement in writing. (RW)

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Parkrose School District's Goal-Based Instructional Program

Meeting the Minimum Standards and Beyond

by
Virginia Shaumleffel

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Preface

In the past two decades, legislatures throughout the United States have responded to the public's call for public school accountability by enacting statutes and regulations that require local districts to demonstrate that students are being given a sound education. Local districts have then had the job of developing or revising instructional programs to meet these requirements.

The Parkrose School District's program, the result of seven years of work, was chosen as one of twenty local district programs in the United States to be included in a 1979 report on minimum competencies sponsored by the National Institute of Education. This *Bulletin* presents this well-organized, comprehensive goal-based program.

Philip K. Piele
Executive Secretary

Acknowledgments

Clarence Mershon, director of program evaluation at Parkrose, provided information and resource material that formed the foundation of this *Bulletin*. Dr. Victor R. Cullens, superintendent, and Dr. Ronald Zook, assistant superintendent, also made significant contribution to this publication.

We wish to thank those wh. eagerly gave their time that this project might be shared with other Oregon school districts.

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Introduction

In recent years reports of declining achievement scores among school-aged children and of high school graduates unable to read, write, or compute focused attention on the process of schooling. Citizens, educators, and lawmakers began to question whether the public schools are meeting their obligations or merely wasting students' time and taxpayers' dollars.

Responding to these concerns, educational policy makers have taken steps to demonstrate to the public that students are graduating from high schools with skills that will make them useful, literate members of society. Legislatures and state departments of education across the nation have enacted statutes and administrative rules requiring school districts to develop programs that provide evidence of students having reached specified competency levels.

These programs have many names and their implementations many variations. A wide assortment of terms such as "accountability," "graduation requirements," "mastery learning," "minimum standards," and proficiency testing" fill the literature and confuse the issue. Debates among educators and lawmakers revolve around the definitions and relative importance of "basic skills," "life skills," and "school skills." Competent students are a goal worth striving for, but the steps necessary to reach that goal are difficult to clarify and seemingly impossible to agree upon. Consequently, most states have adopted their own broadly stated goals and have left the further refining and implementation of programs to individual local school districts.

Oregon has also followed this practice. Under the authority of Oregon State Statute 326.051, the Oregon State Board of Education adopted in June 1976 revised minimum standards "intended to insure that all Oregon students have access to a sound, comprehensive curriculum." These standards are based on six broad goals designed for each student's effective functioning in six life roles: Individual, Learner, Producer, Citizen, Consumer, and Family Member.

Local districts are required to implement these goals by reviewing and revising instructional planning and by demonstrating these goals have been met by each student in conformity to the state's administrative rules. Since the reviewing, revising and demonstrating task is so tremendous and contains so many variables, and since each school district is allowed to develop its own list of priorities and own methods for compliance, no two districts will create identical programs.

It is the purpose of this *Bulletin* to describe the program of one Oregon school district, Parkrose School District No. 3. The Parkrose district has spent the past seven years developing and validating a goal-based assessment program that has had a profound effect on Parkrose's entire educational program. Giving direction to this program has been the responsibility of Clarence Mershon, director of program evaluation for the district.

The Parkrose program consists of four major components: curriculum goals; criterion-referenced testing for reading, writing, and computing competencies that demonstrates student attainment of district goals; norm-referenced testing in reading, language arts, and mathematics that demonstrates student ability compared to national and/or tricounty (Clackamas,

Multnomah, and Washington) norms; and inclass and district-level record keeping of additional competencies required by administrative rule.

Because district personnel believe that basic skills are prerequisite for meeting more advanced competencies, testing in reading, writing, and computing begins in the third grade; by the end of the ninth grade nearly all students have achieved district- and state-required competencies in these three areas. In senior high, then, students work toward accomplishing "life skill" competencies such as citizenship or consumer, or they may take courses to meet credit requirements or electives to supplement and broaden their basic education.

This *Bulletin* will describe, in turn, Oregon's minimum standards, the philosophy and history behind the Parkrose program, the program itself, its results and remediation procedures, the provisions it makes for individual differences, and the possibilities for exporting the program. Finally, the research that was used to develop the Parkrose program will be briefly explored.

An Outline of Oregon Minimum Standards

The Minimum Standards for Public Schools found in Division 22 of Oregon Administrative Rules (OAR) contain traditional attendance and credit requirements for program completion (e.g., each student shall earn a minimum twenty-one units of credit in grades nine through twelve, including three units of language arts, one unit of mathematics, etc.). Yet these standards contain performance requirements for program completion that shift the school's instructional emphasis to a goal-based planning system. Since the Parkrose program developed in response to this second requirement area and so closely follows State Department of Education guidelines, it is appropriate to examine these minimum standards concerning goals and learner outcome assessment.

The foundation of the entire Oregon Minimum Standards program is the six life goals. It is the duty of each local district to provide educational opportunities necessary to enable each student to function effectively as a (an):

- "*Individual*": to develop the skills necessary for achieving fulfillment as a self-directed person; to acquire the knowledge necessary for achieving and maintaining physical and mental health; and to develop the capacity for coping with change through an understanding of the arts, humanities, scientific processes, and the principles involved in making moral and ethical choices;

- "*Learner*": to develop the basic skills of reading, writing, computing, spelling, speaking, listening, and problem-solving; and to develop a positive attitude toward learning as a lifelong endeavor;

- *"Producer"*: to learn of the variety of occupations; to learn to appreciate the dignity and value of work and the mutual responsibilities of employees and employers; and to learn to identify personal talents and interests, to make appropriate career choices, and to develop career skills;

- *"Citizen"*: to learn to act in a responsible manner; to learn of the rights and responsibilities of citizens of the community, state, nation, and world; and to learn to understand, respect, and interact with people of different cultures, generations, and races;

- *"Consumer"*: to acquire knowledge and to develop skills in the management of personal resources necessary for meeting obligations to self, family, and society;

- *"Family Member"*: to learn of the rights and responsibilities of family members, and to acquire the skills and knowledge to strengthen and enjoy family life.
(OAR 581-22-201)

To accomplish these goals, the administrative rules require local school districts to adopt and implement an instructional plan that establishes sets of district goals, program goals, and course goals. The plan must also provide for individual student needs, interests, and abilities by:

Identifying individuals' learning strengths and weaknesses;

Providing learning opportunities for students responsive to their needs;

Determining progress students make in their educational program;

Maintaining student progress records and reporting the information to parents and students.
(OAR 581-22-218)

Among a student's progress records must be a transcript that reports student attainment of competencies necessary to:

- Read, write, speak, listen;

- Analyze;
- Compute;
- Use basic scientific and technological processes;
- Develop and maintain a healthy mind and body;
- Be an informed citizen in the community, state, and nation;
- Be an informed citizen in interaction with environment;
- Be an informed citizen on streets and highways;
- Be an informed consumer of goods and services;
- Function within an occupation or continue education leading to a career.
(OAR 581-22-231)

Certified attainment of all the above competencies is to be included as a part of graduation requirements not later than the graduating class of 1981.

Finally, administrative rules require each local district to evaluate its entire program to discover weaknesses or deficiencies, and to set priorities and develop procedures for making program improvements.

This outline of the Oregon Minimum Standards will serve as a partial preview for the Parkrose program. Evidence of how the district fulfilled the OAR requirements follows throughout the rest of the *Bulletin*.

Some Decisions Behind the Program

Perhaps the most difficult task in beginning any new program is creating a philosophic framework from which to build. Program developers must sort, screen, categorize, and arrange ideas, choices, and priorities until finally a plan begins to take shape. The Parkrose program is the result of this painstaking process. Although the program continues to grow and change, the district had to make several decisions at the beginning that have influenced the whole character of the program.

In response to the state-level graduation requirements movement in the early seventies, the district first decided to examine its existing program to determine weaknesses or deficiencies. An initial assessment in mathematics, given to ninth graders in 1974, showed that only 34 percent of the 400 students could perform enough elementary math skills to pass the test. Clarence Mershon, Parkrose's director of program evaluation since 1973, told the writer in an interview, "We began checking at the third-grade level and found some third graders unable to do things teachers expected them to do."

The question for the district then became not "Were there weaknesses in the instructional program?" but rather "Why were there such weaknesses?" Mershon points out two main reasons: "First of all, we (the district) didn't know the weaknesses even existed, and secondly, teachers were traditionally following the textbook in planning what was to be taught. They weren't thinking about the skills and subskills necessary to teach toward a particular goal. Consequently, teachers were spending much of

their time teaching material that children were not able to handle or that children already knew."

Now that problems were uncovered, the district had to look for solutions. The next decision was to use the Oregon Administrative Rules as a framework for rebuilding an instructional plan. Mershon says, "We were impressed by the overall grasp of what education was all about by people in the State Department at that time. Dr. Pernell had a vision of what education ought to be and had the outlines of a fine program."

Parkrose followed the Oregon Administrative Rules by defining district goals, program goals, and course goals. The ten prescribed performance requirements for graduation became headings for a set of seventy district competencies. (See Appendix A for a list of these competencies.) The district developed an assessment system that used newly written and validated test items. Results of the tests were recorded and reported to the community as required.

In the course of this program development, the district set priorities. Planners decided to concentrate assessment procedures on school skills and to expend less district effort on testing life skills. Therefore, gradewide tests administered by district personnel measured attainment of reading, writing, and computing goals, while individual classroom tests administered by inclass teachers measured attainment of competencies in areas such as informed consumer or developing a healthy mind and body.

Also having great impact on the program was the district's decision to develop its own set of criterion-referenced tests for measuring attainment in school skills (i.e., reading, writing, and computing),

rather than depend on traditional standardized norm-referenced tests. The criterion-referenced tests show where an individual student stands in his or her educational career in the Parkrose School District. The district, however, continued to use standardized tests to compare district results with state or national results. As Mershon makes clear, "We want our kids not only to pick up the skills we're after, but also to look good when compared with national groups. It wouldn't be desirable to have youngsters accomplishing all our goals and skills and then find out they are way below the norm of other (comparable) groups."

Finally, the most critical philosophic decision was to make the program a mastery-learning model rather than a competency-learning model. Mershon explains, "Competency is a dangerous word. It conjures up those districts and states that test all their eleventh graders to see if they can add. In that type of testing situation you're demeaning 75 percent of your kids, who of course can add. You find out 25 percent can't add, but you don't have a chance to respond." In a mastery-learning model students are required to master step-by-step skills and are tested all along the way. The Parkrose district begins mastery testing at the third grade. Almost all students attain state and district prescribed competencies in reading, writing, and computing by the end of the ninth grade. Those who don't achieve the goals receive remediation.

This last decision has had the most far-reaching effect on the whole school district. The fundamental principle of mastery-learning is, in the words of Mershon, "Kids can learn if you know what you want to teach them." To implement this principle the district had to revise and rewrite

much of its curriculum to include specific, well-defined goals. Teachers had to be instructed in the use of the new curriculum. The district bought new textbooks and planned new schedules to provide for additional testing sessions.

The district was transformed, but the process has been gradual, taking place over the past seven years and still continuing. The next section will take a look at the seven-year development of the Parkrose program.

History of the Program

The Parkrose program had its origin in the State Board of Education's work in the late sixties and early seventies toward establishing a set of high school graduation requirements. In June 1968, the Oregon Department of Education began analyzing educational needs in the state. As part of this analysis and in order to survey public opinion, the state superintendent and board initiated a series of town meetings throughout the state. Public sentiment favored making public schools accountable for teaching certain skills and for measuring attainment of those skills.

Between 1969 and 1971, a subcommittee of the Oregon Association of Secondary School Principals developed a first draft of a proposal for high school graduation requirements that it presented to the state board at a public hearing in September 1971. During the next year, representatives from various Oregon educational and citizens organizations discussed and revised the graduation requirements, until finally, in September 1972, the Board of Education approved a fourth and final draft and set the date for statewide implementation no later than the graduating class of 1978. Although the state board went on in 1974 and finally in 1976 to create and adopt more comprehensive sets of minimum standards, which included the original graduation requirements, Parkrose began working to meet state requirements in 1972.

In an initial step in 1973, the district assigned Clarence Mershon, then a district high school mathematics teacher with a master's degree in curriculum, to head the project. The district also established a steering

committee to monitor progress and review all recommendations. The project consisted of two major goals: (1) the development of a district curriculum that included explicit program goals, instructional goals, and performance indicators and (2) the development of a system of assessment that would accurately demonstrate student achievement of those goals.

Under the supervision of Mershon, teams of teachers, administrators, and any parents or students willing to become involved worked to develop a district curriculum. The teams first set program goals for fifteen different curriculum areas in kindergarten through twelfth grade. During the next phase, teachers and specialists from each curriculum area developed course goals, instructional goals, and performance objectives for each subject. After the state adopted performance requirements for graduation, committees defined seventy district competencies that tied into the state requirements.

Although work in curriculum continues, the district now has an elaborate curriculum guide in all areas, including language arts (revised June 1977 and 1979), social studies (revised July 1979), and mathematics (revised July 1977). In addition, the list of seventy competencies serves as a checklist to insure that all students are able to satisfy state minimum standard requirements, usually by the completion of ninth grade.

While some district personnel developed curriculum, others worked on the assessment program. Project director Mershon began researching ideas in criterion-referenced testing based on the theories of W. James Popham and test-item calibrating based on the theories of Georg Rasch. Feeling

the need for outside help in assessment procedures, Mershon drew on the expertise of George Ingebo and Fred Forster, heads of measurement and evaluation, respectively, in the Portland Public School District, and W.J. "Bus" Nance, graduation requirements specialist with the State Department of Education. As Mershon gained knowledge in test-item writing, he began supervising teachers who formed committees to write items in their subject areas. In 1974, after more than a year of preliminary research, consultation, and item writing, the district gave the first mathematics test to ninth-grade students in the district. The results of that first test were, as Mershon put it, "dismal." Only 34 percent of the ninth graders passed. The cause of the low score was two-fold: Some test items were invalid, and many students did not have the mathematical skills necessary to pass the test.

Mershon called a conference of teachers who admitted that ninth graders should have been able to pass the test given valid test items and the skills assumed to be acquired by the ninth grade. More determined than ever, the district developed new and more valid test items and continued work on clarifying step-by-step educational goals so that teachers could more clearly observe the progress or lack of progress of each student.

As committees grew more adept at writing valid test items and calibrating them to specific performance objectives, the district began to create a bank of field-tested items that were typed on index cards and filed by objective in Mershon's district office. Later, as a member of the Northwest Evaluation Association (NWEA), the district drew additional items from the association's collection.

The need for a large number of test items resulted from security problems that developed during the first administrations of the tests. In the process of distributing and collecting test forms, some were lost, and sometimes copies were found on students outside of class or tacked to a school bulletin board. To thwart attempts at test piracy, the district needed a new test to administer. From its item bank the district could randomly select a number of appropriate items, place them in acetate folders, copy them, and have a complete battery of nine tests ready within two hours.

The Parkrose program has been basically hand-made, and many components are the result of "necessity being the mother of invention." To eliminate typographical errors in producing tests, items were typed on index cards and, when selected, lined up in a test form, copied, then run off. However, index cards tended to slide crooked or off the page as the form was being placed face-down for copy. One day, as Mershon was struggling to copy a test, a colleague happened by who collected stamps. He suggested that Mershon place the cards in the type of acetate folder that holds and displays stamps. Mershon tried it; it worked and has been a part of the process ever since.

Today the program is still a priority for Parkrose. Curriculum revision and test-item production continue. Increasingly, the district is using computers. Student records of competencies completed are entered into the computer facility provided by the Multnomah County Education Service District, under the supervision of Peter Wolmut, director of measurement and experimental research. In the future Parkrose hopes to

computerize its entire assessment program. Computers will be able to select test items, correct response sheets, and enter the students' scores directly on a competency record.

Description of the Program

Goals

The program that Parkrose has developed during the past seven years is a complex and comprehensive goal-based system. Some goals are tied directly to the Oregon minimum graduation requirements; others greatly exceed state requirements. This section will define and give examples of Parkrose:

- district goals
- program goals
- course goals
- instructional goals
- learning activities
- performance objectives or indicators

District goals. The Parkrose district has three major district goals taken from the Oregon Administrative Rules minimum standards. They are to: "define its instructional programs in terms of expected learner outcomes, assess the effectiveness of its program in meeting goals in reading, writing, and computing, and report its success (or failure) in meeting goals in these three areas to the community." These goals have been the impetus and framework for all instructional changes in the district.

Program goals. Program goals are common goals within each of the fifteen curriculum areas. These goals have been developed at the district level by committees of teachers and specialists within each curriculum area and establish the general purpose of each program throughout the district. The district's Mathematics Curriculum Guide, for example, lists

ten program goals. The first five are included in the state's minimum requirements for graduation and are attained by the end of the ninth grade; the last five are program goals to be attained by the end of a student's math career in Parkrose. An example of a program goal in mathematics is: "The student knows and is able to use the symbols, elements, operations, and structure of the following: whole numbers, integers, rational numbers, complex numbers, and other number systems, both finite and infinite."

Course goals. These are the goals of a specific grade level or course and are developed by a department. This is the last goal level to be prescribed in district curriculum guides. An example of a seventh-grade mathematics goal is: "The student is able to perform the operations with whole numbers, decimals and fractions."

Instructional goals. These are the specific long- or short-range goals developed and used by the individual teacher to implement course goals. Teachers who share an assignment or who teach the same assignment may work together to write these goals. For example, "The student is able to add, subtract, multiply and divide whole numbers."

Expected learning activities. These are the lesson plans written by individual teachers, designed to facilitate learning. They must include materials and activities used. Each teacher must maintain a file or record of expected learning activities, available for inspection. For example, "Using text examples (pp. 96-105) as blackboard exercises, the teacher will demonstrate the use of the multiplication axiom. The student will be assigned practice exercises from the text, page 100, #6-12, for classroom practice and discussion."

Performance objectives. These are statements of expected learner outcomes. The development of performance objectives for evaluation is primarily a teacher's responsibility except for those courses that include graduation requirement competencies. Performance objectives for graduation requirements were developed at district-level by committees of teachers, students, and community members. Each curriculum department also wrote sample performance objectives for many courses. Individual teachers may use the sample objectives if they choose. An example (a graduation requirement): "Given randomly arranged exercises of addition and subtraction, student will complete the computation with eighty percent accuracy."

Although all the above sample goals and objectives have been taken from the mathematics curriculum, similar ones exist in the other fourteen curriculum areas. Since the district's assessment focus is on the "basic skills" of reading, writing, and computing, Appendix B lists the program goals in each of the three areas of reading, writing, and computing--the "basic skills" on which Parkrose's assessment model focuses--and the grade level at which specific skills are primarily developed and assessed.

Assessment

The network of goals, which spans fifteen curriculum areas and runs from broad district goals to specific daily activity goals, covers the district's entire instructional program. Only seventy of the goals are minimum requirements for graduation; the rest are to insure that Parkrose students receive an education far beyond minimal skills. All goals are assessed by teachers within their classes, but the district monitors the progress made in attaining its seventy minimum competencies. The district

is especially dedicated to the attainment of reading, writing, and computing skills. This section will examine Parkrose district's two main types of assessment procedures for minimum graduation requirements: inclass assessment and district-level assessment.

Inclass Assessment

Inclass assessment procedures for minimum graduation requirements may be tests or assignments that demonstrate student competency in a specific required area. For example, in a speech class at Fremont Junior High School, teacher Mark Fantetti monitors speech competency by assigning specific speeches or class activities that demonstrate the ability to accomplish the six listening, oral communication, and parlimentary procedure competencies required by the district. He includes the following instructions on a handout listing speech competencies given to students in his Speech I, II, or III classes:

> Competencies are <u>not</u> tied to grades in class. As you conquer each of these competencies it will be recorded in your file as well as in mine. You <u>do not</u> have to conquer all of these competencies to pass this course. You <u>do</u> have to conquer them all before graduating. You <u>can</u> conquer them all in this course.

As the semester progresses, Fantetti evaluates student performance in each speech area. At the end of the course he must report each individual student's success in each competency to the language arts department, which records attainment on a student record card (see Appendix C, top card, competencies 1.1 and 1.2). The language arts department, then, reports attainment to the district office, where personnel check off the demonstrated competency on the student's competency status report (see

Appendix A, competencies 001, 002, 006, 007, 008, and 009). Social studies, physical education, and other departments handle assessment in much the same way.

District-Level Assessment

The skills of reading, writing, and computing are the first priority for Parkrose, and the attainment of them is monitored closely. The district uses three types of assessment instruments for these skills:

- norm-referenced tests
- holistically graded writing exercises
- criterion(goal)-referenced tests

Although a complete schedule of test administration is found in Appendix D, the accompanying table summarizes results from the district's 1980 Report of Program Assessment.

Table 1: Summary of 1980 Program Assessment Results

Area	District Goal-Referenced Tests (Grade Administered)	Standard Achievement Tests (Grade Administered)
Reading	3, 5, 7-9*	4, 7, 10
Writing	4, 7, 8-9* 10, 11	4, 7, 10
Mathematics	3, 6, 7-9* 10-12**	4, 7, 10

* Graduation Requirement Level
** Advanced Courses

Norm-referenced tests are used to compare the Parkrose program and Parkrose students with other programs and other students. Elementary (grades 3-8) achievement tests are normed for the school populations of Multnomah, Clackmas, and Washington counties, with fifty established as

an average score. For tenth-grade students, Parkrose chose to use the California Achievement Test, which is normed for the school population of the United States; scores are given by percentile rank with average percentile as fifty. Although the data are not suitable for program assessment purposes, Parkrose also reports, for public information, the scores of the School and College Ability Test (S.C.A.T.), given in grades four and seven, and the Scholastic Aptitude Test (S.A.T.), taken in grade twelve by those students who so choose. Parkrose students' average scores are plotted on charts that also show national averages for comparison.

Although the norm-referenced tests cover such language arts skills as reading, grammer, and spelling, Parkrose recognizes the need to assess actual samples of individual student writing. One part of the assessment procedure in the fourth, seventh, and tenth grades, then, is the completion of one (fourth grade) or two (seventh and tenth grades) written exercises rated by district teachers trained to use a holistic scoring method ranging from one (low) to four (high). Two different readers read and score each exercise; the first reader's rating is not known by the second.

Score value descriptions are different at each level. For example, listed below are the criteria used at each level to determine the highest score of four on an exercise:

> Typical Score of 4 (Grade 4): The exercise is well organized. Transitional words (first, then, now, when, before, next) are frequently used. The work tends to be lengthy in the number of sentences and the number of words per sentence. Use of modifiers is evident as well as some use of clauses. Run-ons and fragments are conspicuously absent. Some minor errors may be observed but the exercise is very well written.

Typical Score of 4 (grade 7): The exercise shows few errors, and the topic is taken to completion. The paragraphs are well organized, distinguishable, and transitions are used. Sentences are varied in type, including simple, compound and complex. Handwriting is legible, and the work may show imagination. The exercise is well written and demonstrates a mastery of the writing skills expected at this level.

Typical Score of 4 (grade 10): The exercise is well organized and more than adequately addresses the subject. Paragraphs are well developed. Sentences are of varied type (simple, compound, complex, compound-complex). Transitions are used for continuity. Standard English is characteristic. Almost no misspelling exists and mechanical errors are infrequent. The exercise reflects a rich vocabulary with almost no use of jargon or cliches. The exercise is exceptionally well written.

The third district-level assessment procedure--criterion-referenced testing--is the result of seven years of work by the administration, the project director, outside specialists, teachers, and advisory community members who were willing to write, field test, calibrate, and many times, rewrite hand-made test items referenced to district goals in reading, writing, and computing. This criterion-referenced testing has as its foundation a large bank of categorized test items that project director Clarence Mershon has filed by objective in his district office.

As reported above, teachers and specialists in each area of reading, writing, and mathematics wrote the first test items, which were field tested for reliability and validity in tests given to samples of district students. The primary tool used in item analysis is the Rasch technique. This technique is used to calibrate the difficulty of an item in relationship to a specific, locally determined student achievement level.

Most of the items in the Parkrose item bank as well as in the Northwest Evaluation Association's test item bank from which Parkrose

now draws are given a Rasch item estimate (RIT). As Ray Miller writes in an article in the NWEA Journal, the RIT "indicates the relative difficulty of all the test items in the bank in comparison to each other." On the basis of RIT values, test constructors may quickly develop tests of equal difficulty, drawing from a large collection of parallel items. Analysis for Rasch calibration is done by computers. Using a point biserial correlation, the computers also weed out unreliable items, such as those with ambiguous, deceptive, or more than one correct response.

Once test items are validated and calibrated, they are typed on index cards with their RIT and Parkrose goal-reference number, as well as tricounty goal number, and filed in the district office's large collection. There are, for example, 600 items in mathematics (100 per goal area) from which to construct a test. The program director selects appropriate test items, places them in acetate folders to align them on a page, copies and runs off each page, and staples the pages together, with an additional instruction sheet included on the front of the booklet.

Generally, the district's criterion-referenced mathematics test is comprised of five items for each goal area (thus thirty items). The reading test likewise is made up of thirty items assessing six goal areas. The writing test consists of forty items--twenty each in punctuation and capitalization, and twenty words selected from the Dale Word List compiled by the Oregon State Department of Education. A test never contains fewer than twenty items. Students may repeat parts of the test they have failed, but the test always contains at least twenty items even if they repeat in only one goal area.

Testing coordinators, including the program director or specified teachers, administer tests in the school building. Students are tested in a room separate from their usual classroom. Mathematics tests may be given at any time students are ready; reading and writing tests are given only at specified times.

Scoring and record keeping are done manually at the evaluation office. Usually 80 percent proficiency in each goal area is required. Twenty-four hours after the test, each teacher receives a list of each student's test scores broken down into goal area. If a student has attained the required proficiency, a "yes" is registered by his or her name in the appropriate goal column; if a student has not passed, a "no" is registered. A teacher can then determine which students have attained specific goals and which may need additional instruction. The results are not diagnostic; they do not determine why a student has failed, but they do pinpoint areas where a teacher might need to concentrate instruction.

Reporting

The third district goal is to "report success (or failure) in meeting goals in these three areas (reading, writing, and computing) to the community." Parkrose meets this goal in several ways.

Yearly, the evaluation office publishes a Report of Program Assessment as a public document. It purposes are five:

1. It will provide data regarding the District's instructional programs, particularly reading, writing, and mathematics, in response to OAR 581-22-208;
2. It will serve as a resource for Board, administration and staff in planning;
3. It will serve as a discussion document for informing various community audiences about the District's instructional programs;

4. It provides indicators of the progress each building is making in meeting priority curricular goals.

Included in the report are the data compiled for each school and for the district as a whole, detailing district criterion-referenced test scores, norm-referenced standard achievement test scores, S.C.A.T. and S.A.T. scores, and test scores and other data regarding students in special programs funded by the federal government. Graphs show comparisons of schools within the district, comparisons with other norm groups (i.e., tricounty or United States), or longitudinal data comparing the test results over the past few years.

In addition to the report, parents regularly receive written notice of their children's status within the Parkrose program and compared to norm groups. At the end of ninth grade, each student's parents receive notice of their child's attainment (or lack of attainment) of the minimum graduation requirements. Parents also receive reports of their child's results on standardized tests (see Appendix E) and are encouraged to consult with district counselors about further clarification.

The district also reaches parents through its monthly interaction with the Citizen's Advisory Committee and its local public meetings with parents and other concerned community members.

Results

The Parkrose program is in its eighth year. The results of the program are favorable thus far. William Gorth and Marcy Perkins, in a 1979 report on a study of minimum competency testing programs by the

National Evaluation Systems, Inc., cited the following as substantial proof of the Parkrose program's success:

1. In general, the district had declining standardized test scores until 1974 (prior to the program's inception), and improved standardized test scores since 1974;

2. The percentage of students meeting the program goals has increased each year. This is especially impressive in light of the fact that any change made on these tests has been designed to increase the difficulty level.

3. In 1975, only fifty percent of the sixth-graders passed the tests in whole number operations; now (1979), better than ninety percent pass the tests referenced to these operations.

The district's 1980 Report of Program Assessment states that in the area of reading third- and fourth-grade achievement is at "an exceptionally high level." In seventh grade, standard achievement scores held steadily above average compared to tricounty norms. In tenth grade, 66 percent of district students scored above average; the average Parkrose tenth grader scored 1.5 grade levels above the national average. Only in the fifth grade did scores decline, but this might be attributed to the use of new, more difficult test items drawn from the Northwest Evaluation Association. Most important to the district, approximately 95 percent of all ninth-grade students met reading competencies.

The writing scores show the weakest point of student competency based on school goals. At the end of the ninth grade only 55 percent of the students had met all district writing goals. The levels of achievement improved slightly compared to previous years, but scores in writing are not as high as those in mathematics and reading. In response to the weakness, district language arts teachers have drafted a new writing curriculum that articulates writing goals even more clearly than in the language arts curriculum.

The report presents favorable statistics in mathematics achievement. Parkrose students' achievement on 1980 standardized tests is described as "the highest level on record" in fourth grade, "a relatively high level" in seventh grade, and "an exceptionally high level" in tenth grade, with students averaging two grade levels above the national average. Approximately 88 percent of ninth-grade students achieved all mathematics goal levels by the end of ninth grade.

Besides the statistical results, teachers are reporting favorable results from the system. Tom Lockwood, a fifth-grade teacher at Shaver Elementary, likes the goal-based approach. Lockwood told the writer, "The district is plainly saying 'Here's what we're responsible for'." Gary Poppinga, a seventh-grade mathematics teacher at Fremont Junior High School, says that goal-based instruction has many advantages: "It takes the hassle out of motivating students, it makes for a more stable mathematics department (since everyone is aware of what must be taught), and it identifies areas where kids are deficient. I wouldn't want to teach anywhere where they didn't have a program like this." Mershon says, "We couldn't abandon the program. There would be an uproar because people see it as having a positive effect."

Remediation

For those students who do not pass minimum competencies at the end of ninth grade, Parkrose has a plan of remediation. Each building has a resource center where students can go if they are experiencing difficulty in a competency area. At the high school, students who have not mastered basic skills required by the district are assigned to competency laboratories where they can receive extra instruction.

If a senior high student has not met one or two graduation requirements, alternative requirements may be established at a meeting of teachers, students, and parents. Failure in a competency area does not usually result in the denial of a diploma. Since assessment is carried out so early in a student's educational career, steps can be taken to aid individuals who are experiencing difficulties.

Individual Differences

The Parkrose District's educational plan also includes a program for the emotionally handicapped. The program specifies four objectives:

- Each child referred to the Parkrose project will have a Cases Manager assigned to sponsor him/her through screening and placement procedures.
- An Individual Educational Plan will be written for each student. The plans will be reviewed and revised as needed.
- Parents will be involved in a cooperative effort to provide consistent, compatible home-school programs.
- The progress of each student leaving the Project will be documented until the time that the student either completes the twelfth grade or withdraws from Parkrose Public Schools.

Emotionally handicapped students also work toward completing competency requirements for graduation. Of the nine students in the program in 1980, only one twelfth-grade student attained all district competencies. Nevertheless, the evaluator of the program believes that "these goals are well-defined, explicit and measurable, and provide a more accurate record of student progress than data from a standardized achievement test. Accordingly the evaluator recommends that emotionally handicapped students participate in the district's testing program."

Conclusion

Even though Parkrose has already developed a complex and comprehensive instructional plan, the staff continues to revise curriculum and testing procedures to make education for Parkrose students more valid and valuable. Mershon states that even after seven years of dedicated work the district is experiencing "a tremendous gap between where we are with the program and where we ought to be." The program remains a high district priority and will continue to grow and improve.

The Status of Program Exportation

As the Parkrose goal-based instructional program now exists, exportation would be difficult. As this *Bulletin* demonstrates, curriculum guides, test items, reporting methods, and progress reports exist, but as yet no comprehensive package has been developed.

As the program becomes increasingly computerized, exportability will be facilitated. As the Northwest Evaluation Association's and the tricounty's item banks become more complete, other districts will be able to draw from these resources as well.

The Parkrose District is willing to share its resources with other districts. Mershon says, "Let's work together. If other districts want to accomplish what the state intends that they accomplish, exportability (of the Parkrose program) is appropriate."

Those wishing further information may contact:

Mr. Clarence Mershon
Director of Program Evaluation
Parkrose School District
10636 Northeast Prescott Street
Portland, OR 97220

Phone: 503/257-5249

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Theoretical Roots of the Program

The following pages contain summaries of two of the theoretical models that Parkrose investigated when developing its program. Those wishing further information on research resources may contact Clarence Mershon, or the Multnomah County Education Service District (P.O. Box 16657, 220 S.E. 102nd Street, Portland, OR 97216) or the Northwest Evaluation Association (P.O. Box 1357, Tacoma, WA 98401).

The Rasch Model

The Rasch model of test item analysis was developed by the Danish mathematician, Georg Rasch. Interpreted for American educators by Ben Wright of the University of Chicago and other scholars, the model is used by the Northwest Evaluation Association, the Parkrose School District, and other testing facilities to compare and order student achievement according to item difficulty. The Rasch model lends itself well to districts that are developing a goal-based curriculum with criterion-referenced tests to monitor student attainment.

The basic equation on which the Rasch item estimate is based is as follows (taken from Fred Forster's Notes from the Rasch Conference):

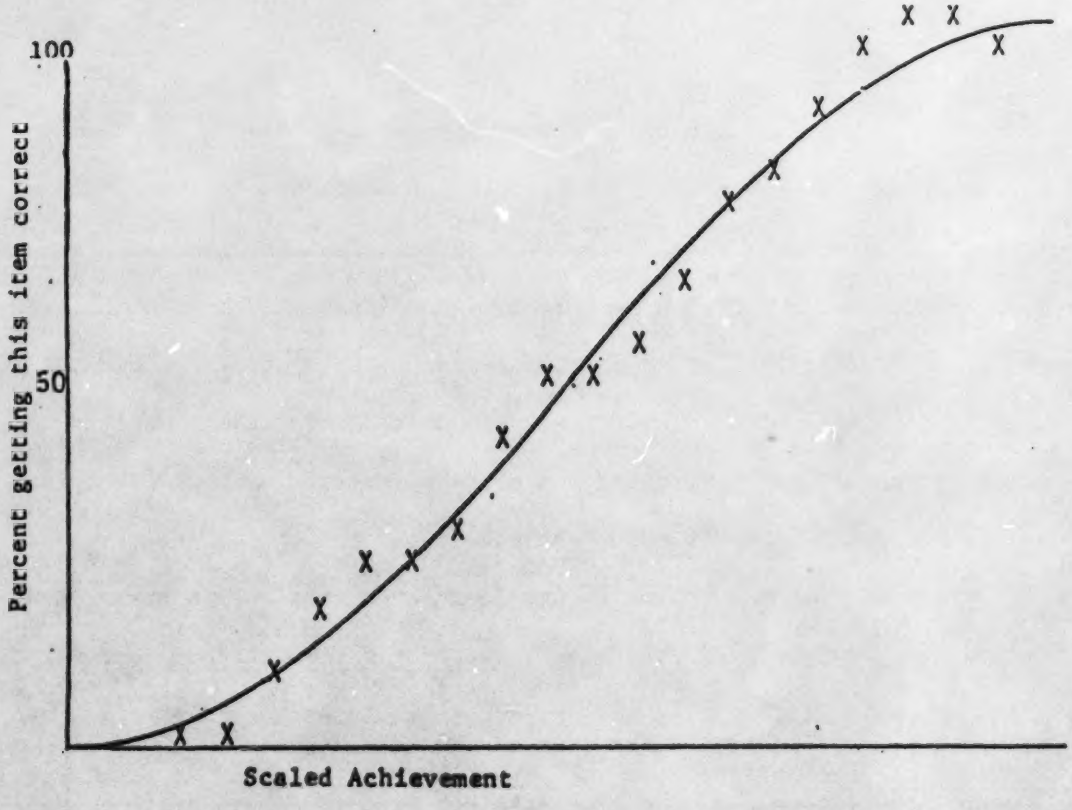
a = the achievement of the student on an interval scale
d = the difficulty of the item on the interval scale
q = the probability that the person passes the item
exp = the exponential function (the opposite of the logarithmic function)

then: $$p = \frac{\exp(a+d)}{1 + \exp(a+d)}$$

Using this equation, it is mathematically possible to estimate an item's specific difficulty level as measured on an interval scale and a student's specific achievement level as measured on that same scale. A major advantage of this model is that the estimate is valid for any sampling of students.

Results from testing an item may also be placed on an item characteristic curve (ICC) that graphically displays the actual performance of students compared to a theoretically ideal curve, as shown in figure 1.

Figure 1: An Item Characteristic Curve



Source: Fred Forster and Chad Karr, Using the Rasch Model to Increase the Power of Item Analysis, p.4

The X-axis is the achievement scale, which may be a raw score or an equivalent achievement estimate based on the Rasch model. The Y-axis is the percentage of students who correctly answered the item. If a Rasch scale is used as the X-axis, the difficulty of the item calibrated in Rasch item estimate (RIT) corresponds to the score on the ICC where 50 percent of the students with that score get the item right.

Once an item is calibrated with its RIT, it can be placed in an item bank, categorized by curriculum objective and level of difficulty. In this way, test constructors can request or select individual items and custom-build an original test for each administration.

The Work of W. James Popham

W. James Popham of the University of California at Los Angeles has done research and writing in instructional planning and evaluation especially in the area of criterion-referenced measurement.

In the area of establishing instructional goals, Popham maintains in his book Establishing Instructional Goals that the important elements included in the process are systematic instructional decision-making; precise, behaviorally stated instructional objectives; a set of performance standards; and evaluation of the performance.

Educational objectives must take into account student needs and interests, as well as the needs and requirements of the subject taught and the society around the student. Objectives should be precise, expressing exactly the desired performance and only describing observable behavior.

Once objectives have been established, evaluation procedures for either preassessment or postassessment must tie into the desired behavior. This is where criterion-referenced tests become essential.

In his book Criterion-Referenced Measurement, Popham defines a criterion-referenced test as one "used to ascertain an individual's status with respect to a well-defined behavioral domain." The behavioral domain is, then, the set of clearly written program, course, or daily objectives.

In this same book, Popham discusses the preparation, selection, and uses of criterion-referenced tests. He states that the six characteristics of a well-constructed criterion-referenced test are:

(1) An unambiguous descriptive scheme

(2) An adequate number of items per measured behavior

(3) Sufficiently limited focus

(4) Reliability

(5) Validity

(6) Comparative test data

Appendix A

Student Competency Status Report

Personal Development

Communication
001 Listens Critically
002 Analyzes Oral Communication
006 Compose Speeches
007 Deliver Speeches
008 Parliamentary Procedure
009 Evaluates Speech
013 Main Idea
014 Subordinate Details
015 Sequence
016 Relationships
017 Context
018 Inference
022 Punctuation
023 Capitalization
024 Spelling
025 Sentences
026 Paragraphs

Computing
036 Whole Number Operations
037 Fractions
038 Decimal Operations
039 Equivalencies
040 Rounding
041 Problem-Solving
042 Mental Arithmetic
043 Measurement
044 Comparing/Ordering
045 Mathematical Relationships

Scientific/Technological
049 Select/Use Instruments
050 Select/Use Terminology
051 Elaborate Idea of Constant Change
052 Generalize: Living Things Alike

Healthy Mind and Body
064 Satisfactory Perform/Fitness Test
071 Safety/Survival (Self)
074 Participation Individaul/Dual/Team Sport 1
075 Participation Individual/Dual/Team Sport 2

Social Responsibility

Citizenship
080 Constitution
081 Functions/Local Government
082 Political Parties/Voting
083 Legislative Processes

Citizen Environment
087 Organism's Place/Nature's Scheme
088 Ecological Relationships
089 Life Systems
090 Vulnerability of Organisms

Consumer of Goods and Services
102 Consumer Effects Economy
103 Finds Information/Job Opportunities
104 Uses Correct Job Application Procedure
105 Understands Fed/State Employment
106 Compute Take Home Pay
107 Understands Fed/State Income Tax
108 Using Credit
109 Costs of Credit/Interest Rates
110 Effect of Advertising
111 Rights/Responsibility, Buyer/Seller
112 Getting Assistance/Consumer Affairs
113 Laws/Consumer Rights
114 Insurance/Family Security
115 Banking Services/Money Management
116 Types of Investments
117 Renting/Buying Home
118 Budgeting

Career Development
Career Exploration
122 Importance of Work Attitudes
123 Analyzes Career Opportunities
124 Interpersonal Relationship Skills
125 Job Application Skills
126 Relationship: Education/Work
127 Interests, Aptitudes/Career Choice
128 Explore Various Occupations
129 Basic Skills/Future Employment

Career Skill
132 Career Skill

Appendix B

Program Goals and Areas of Assessment

READING

Program Goal: The student comprehends the printed material needed to succeed in his/her educational, vocational, social and personal interests and inquiries. (Language arts program goal 1.3)

Grade 3:

Word Attack Skills: These goals address each student's ability to use word attack skills in pronouncing and using words.

Vocabulary Development Skills: The goals address each student's ability to use context clues to enhance understanding and the use of synonyms, antonyms, and homonyms.

Comprehension Skills: These goals address each student's ability to answer factual or detail questions about a selection, to identify the main idea, make inferences, or determine a sequence of events from a given selection.

Grade 5:

Vocabulary Development Skills: These goals involve skills in using a dictionary, understanding the use and meaning of synonyms, antonyms and homonyms, and understanding that roots, affixes and compound words have basic meanings.

Comprehension Skills: These goals include determining the main idea of a given selection, finding specific information (details), determining order or sequence, and making inferences.

Grade 7-9:

Comprehension Skills: These goals address the student's ability to determine the main idea, find specific information, determine order or sequence, draw relationships, use context clues to improve comprehension, and make inferences.

WRITING

Program Goals:

The student adapts his/her writing to different purposes, audiences and communication forms, using the mechanics and conventions of writing appropriately to assure accuracy and clarity in communication.
(Language arts program goal 1.2)

The student writes honestly, creatively, and clearly. (1.4)

The student uses language in interaction with others, gaining and improving skills in group communication processes. (1.7)

The student understands that his/her experience in the world is given meaning and shape by his/her language. (1.11)

Grade 4:

Mechanics: This goal addresses the student's ability to place punctuation marks and to follow capitalization rules.

Usage: This goal involves the correct use of pronouns (for noun replacement) and agreement between subject-verb (number and tense).

Sentences: This goal involves writing complete sentences or recognizing inappropriate sentence construction such as run-ons, fragments and non-agreement of subject and verb.

Paragraphing Organization: This goal addresses the student's ability to organize a paragraph by determining its topic sentence and developing its ideas in a logical order.

Writing: This goal addresses the student's ability to write a friendly letter using correct form, and to write a correct, coherent paragraph.

Grade 7:

Mechanics: These goals address the student's ability to use those punctuation and capitalization rules defined in the District's scope and sequence.

Grammer: These goals include the correct use of pronouns (particularly the ability to use possessive pronouns correctly), verbs and modifiers.

Sentences: This goal involves the ability to recognize and write correct sentences (eliminating both run-ons and sentence fragments).

Paragraph Organization: This goal addresses the student's ability to develop and organize a paragraph around a topic sentence.

Writing: These goals involve the student's ability to write complete sentences, a coherent paragraph and a correct, coherent letter.

Grade 9:

Punctuation: This goal addresses the student's ability to place punctuation marks and correct punctuation errors.

Capitalization: This goal addresses the student's ability to apply the rules of capitalization

Spelling: This goal addresses the student's ability to spell words randomly selected from a given word list.

Sentences: This goal involves the student's ability to write complete sentences, meeting specific criteria.

Paragraphs: This goal involves the student's ability to write a paragraph, meeting specific criteria.

MATHEMATICS

Program Goals:

The student knows and is able to use the symbols, elements, operations, and structure of the following: Whole numbers, integers, rational numbers, real numbers, complex numbers, and other number systems, both finite and infinite. (Mathematics program goal 2.1)

The student recalls basic facts, knows common equivalencies and is able mentally to make reasonable estimates and perform simple operations. (2.2)

The student knows and is able to apply measuring skills. (2.3)

The student is able to use the language of mathematics of probability and statistics (2.4)

The student is able to use mathematical relationships including the presentation and interpretation of data. (2.5)

Grade 3:

Addition/Subtraction, Basic Facts: This goal states that students will recall the basic facts, 0-18, from memory.

Multiplication, Basic Facts: This goal relates to a student's ability to recall basic multiplication facts, 0-25, from memory.

Comparing, Ordering: This goal relates to a student's being able to count, order, and compare whole numbers (0, 1, 2, 3, ...).

Addition, Subtraction, No Regrouping: This goal relates to the student's ability to add or subtract with no regrouping ("carrying" or "borrowing") required.

Addition, Subtraction, With Regrouping: This goal involves the student's ability to add or subtract correctly when regrouping ("carrying" or "borrowing") is required.

Addition, Subtraction, Representation Level: This goal involves the student's knowledge of the base ten system, particularly the significance of the "tens" column.

Measurement: These goals relate to the ability to add monetary units (dollars and cents), tell time, and use a ruler to measure length.

Problem Solving: This goal involves the student's ability to interpret and/or solve word problems and open sentences.

Open Sentences: This goal involves the student's ability to provide an addend (12 + ? = 16) or a subtrahend (12 - ? = 10)

Grade 6:

Whole Number Operations: This goal addresses a student's ability to add, subtract, multiply and divide whole numbers.

Decimal Fraction Operations: This goal relates to the student's ability to add, subtract, multiply and divide decimal fractions.

Operations With Fractions: This goal refers to a student's ability to add and subtract like fractions.

Whole Number Concepts: This goal speaks to a student's understanding of the base ten number system and rounding, comparing and ordering whole numbers.

Decimal Concepts: This goal refers to a student's understanding of place value, and rounding, comparing and ordering decimal fractions.

Common Fractions: This goal addresses a student's understanding of fractional parts, the meaning of fraction terms, ratio, and comparing and ordering common fractions.

Problem Solving: This goal involves the student's ability to interpret and solve story problems.

Grade 7-9: (Graduation Requirement Level)

Computational Skills: This goal area refers to a student's ability to use the operations with whole numbers, decimals and fractions; to know equivalent forms of a number, to round numbers, and to solve quantitative (story) problems.

Mental Arithmetic: This goal area relates to a student's ability to recognize equivalent forms of a number, determine if an answer is reasonable, estimate answers, and perform operations with multiples of 10.

Measurement: This goal area refers to a student's ability to apply measuring skills in solving problems involving both English and metric units.

Comparing, Ordering: This goal area relates to a student's ability to use the language of mathematics, ratio, proportion and percent, and to understand the basic concepts of probability, use equivalencies, and order numbers.

Relationships: This goal area refers to a student's ability to interpret graphs and tables, compute averages, and convey information utilizing graphs or tables.

Appendix C

Sample Student Record Cards Used by Departments

Name _____ Parkrose Public Schools

Student No. _____ STUDENT RECORD CARD MATHEMATICS Year of Graduation _____

Area: PERSONAL DEVELOPMENT (2.0 Computation)

	*All Comp. Met (✓)	Tchr Initial	Or - Indicate Grade Level Where Competencies Completed	Tchr Initial (Gr. Level)	Entered on Perm. Rec. (✓)
2.1 Basic Skills	( )	____	2.1.1 2.1.2 2.1.3 2.1.4 2.1.5 2.1.6	7th ____	( )
2.2 Mental Arithmetic	( )	____	whole numbers / fractions / decimals / equivalencies / rounding / applications	8th ____	( )
2.3 Measurement	( )	____		9th ____	( )
2.4 Comparing, Ordering	( )	____		10th ____	( )
2.5 Mathematical Relationship	( )	____		11th ____	( )
				12th ____	( )
					( )

Comment: _____

* Lists of students passing district competency tests to be supplied by the Coordinator of Program Evaluation.

Name _____ Parkrose Public Schools

Student No. _____ STUDENT RECORD CARD LANGUAGE ARTS Year of Graduation _____

Area: PERSONAL DEVELOPMENT (1.0 Communication)

	*All Comp. Met (✓)	Tchr Initial	Or - Indicate Grade Level Where Competencies Completed	Tchr Initial (Gr. Level)	Entered on Perm. Rec. (✓)
1.1 Listening	( )	____	1.1.1 1.1.2	7th ____	( )
1.2 Speaking	( )	____	1.2.1 1.2.2 1.2.3 1.2.4	8th ____	( )
1.3 Reading	( )	____	1.3.1 1.3.2 1.3.3 1.3.4 1.3.5 1.3.6	9th ____	( )
1.4 Writing	( )	____	1.4.1 1.4.2 1.4.3 1.4.4 1.4.5	10th ____	( )
1.5 Analyzing	( )	____	1.5.1 1.5.2 1.5.3	11th ____	( )
				12th ____	( )

Comments: _____

* Lists of students passing district competency tests to be supplied by the Coordinator of Program Evaluation.

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Appendix D

Schedule of Criterion-Referenced Tests, Evaluation Procedure and Norm-Referenced Tests,

READING:

Grade 3: A reading test referenced to District goals is administered to third grade students in the spring.

Grade 4: A standardized reading achievement test is administered to all District fourth grade students in the fall.

Grade 5: A reading test referenced to District goals is administered to fifth grade students in the spring.

Grade 7: A standardized reading achievement test is administered to all District seventh grade students in the fall.

Grades 7-9: A reading test referenced to District graduation requirements is administered initially to all seventh grade students and subsequently to any student, grades 8-12, who has not met the performance standard required.

Grade 10: A standardardized reading achievement test is administered to District tenth grade students in the fall.

WRITING:

Grade 4: A test referenced to District goals is administered to fourth grade students in the spring. The test includes items referenced to punctuation and capitalization skills, use of pronouns, subject-verb agreement, complete sentences and paragraph organization. In addition, each student completes a written exercise which is rated by teachers using the holistic method.

Grade 7: A test referenced to District goals was administered to seventh grade students for the first time in the spring, 1980. This test included items referenced to the following goal areas: punctuation and capitalization, use of pronouns, grammar, sentences (particularly fragments and run-ons), and paragraph organization. In addition, each seventh grader completed two written exercises, which were rated by teachers using the holistic method.

Grade 9: The District's punctuation/capitalization test and spelling tests are administered to all ninth grade students. In addition, each student's written work is judged on the basis of established criteria.

Grade 10: A standardized achievement test is administered to District tenth grade students in the fall. In addition, two written exercises are completed by tenth grade students and scored by teachers using the holistic method.

Grade 11: District eleventh grade students were asked to complete a written exercise for the first time in the spring 1980. These were scored using the holistic method.

MATHEMATICS

Grade 3: An arithmetic test referenced to District goals is administered in the spring.

Grade 4: A standardardized mathematics achievement test is administered to District fourth grade students in the fall.

Grade 6: An arithmetic test referenced to District goals is administered to sixth grade students in the spring. In addition, students who demonstrate exceptional competence in mathematics are given an opportunity to take the computational skills section of the graduation competency tests.

Grade 7: A standardized mathematics achievement test is administered to seventh grade students in the fall.

Grade 7-9: Mathematics competency tests are administered to all seventh grade students, and subsequently to eight and ninth grade students who have not met the performance standards.

Grade 10: A standardized mathematics achievement test is administered to tenth grade students in the fall.

Advanced Courses: Tests referenced to the goals of Algebra I are administered to students enrolled in this course. In addition, a final test referenced to the goals of Algebra II was administered to students enrolled in this course for the first time in 1980.

The above materials are excerpted from the Parkrose School District No.3, A Report of Program Assessment, August 1, 1980

Appendix E

Sample Letter Used to Report Individual Assessment Results

Parkrose High School
11717 N.E. Shaver St.
Portland, Oregon 97220

Dear Parent,

In October, the California Achievement Test was administered to all Parkrose tenth grade students. Parkrose School District chose this test for several reasons:

(1) It permits a comparison to be made between our students and a nationwide sample of high school students;

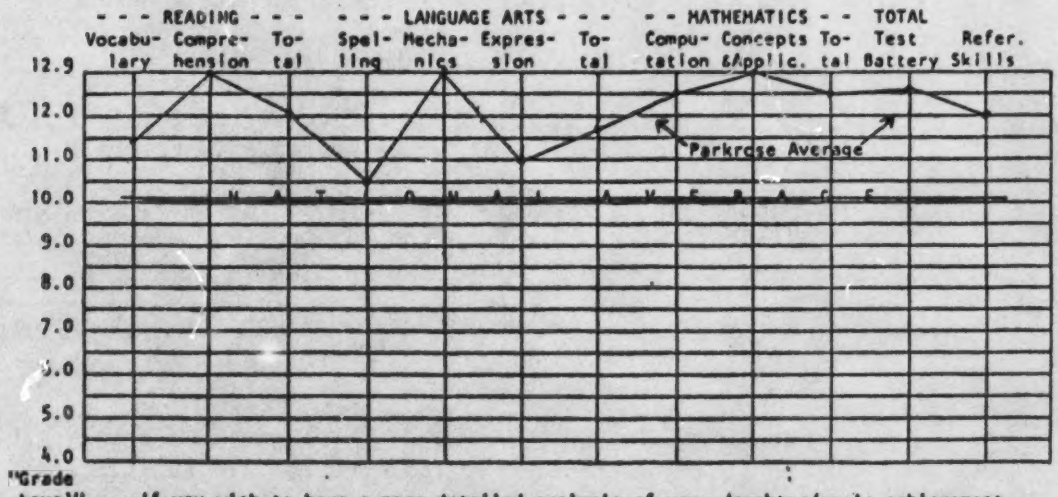
(2) Its content is appropriate to the District's instructional programs and priorities;

(3) It provides valid and reliable information regarding a student's current level of achievement in critical skill areas.

The purpose of this letter is to inform you of your daughter/son's performance on the test. This record will be useful to us in determining which skill area strength might be encouraged, or which skill area deficiency might need special attention. We trust that you will find the information informative and useful.

Achievement scores are only a part of the information available that reflect an individual's academic progress. We are providing the publisher's "grade level" report, which should be considered as an estimate of one's general achievement level, and not a precise measure of grade placement.

The graph below shows the average achievement of Parkrose tenth grade students, the national average for students at this level, and your daughter/son's scores (in red). The highest grade level possible is 12.9, except in "spelling", "mathematics computation" and "mathematics total," in which the highest possible score is level 12.5.



If you wish to have a more detailed analysis of your daughter/son's achievement scores, please contact the counseling office.

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Keating, Paul, teacher, Fremont Junior High School, Parkrose School District No. 3, Oregon, Interview, December 17, 1980

Lockwood, Tom, teacher, Shaver Elementary School, Parkrose School District No. 3, Oregon, Interview, December 17, 1980

Mershon, Clarence, director of Program Development, Parkrose School District No. 3, Oregon, Interview, December 17, 1980

Poppinga, Gary, teacher, Fremont Junior High School, Parkrose School District No. 3, Oregon, Interview, December 17, 1980

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